

Application No. 10/600,436
Amendment dated July 9, 2004
Reply to Office Action of March 15, 2004

REMARKS/ARGUMENTS

Claims 1 to 20 are in the case.

In the detailed Action of March 15, 2004, the Examiner has objected to claims 3, 4 and 6 through 10 under 35 U.S.C. 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter. More specifically, claims 3, 4, 6, 7 and 9 contain the statement "said layer" which the Examiner has requested be clarified. Claims 8 and 10 have been objected to as being dependent upon a rejected base claim.

Applicant respectfully draws to the Examiner's attention that the term "layer" has been replaced by the term "coating", support for which may be found in the detailed description, and more specifically on page 8, last full paragraph and page 9, first full paragraph. Original dependent claims 8 and 10, are now believed to be in condition for allowance as they dependent from an amended base claim which is believed to overcome the Examiner's objections and which are discussed in greater below.

Applicant has also taken this opportunity to correct typographical errors in claim 14 ("are" has been replaced by -area-, and "faces" has been replaced by -surfaces- in claim 17 the term "face" has been replaced by -surface-, and in claim 19 and 20, the term "faces" has been replaced by -surfaces-.

The Examiner has also objected to claims 1 and 3 through 20 under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 5,605,007 to Hinsperger (U.S. '007) in view of U.S. Patent No. 6,161,362 to Forbis et al. (U.S. '362). Applicant respectfully submits that the above noted claim amendments overcome the objections as the prior does not

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disclose the invention now claimed.

More specifically, original claim 1 has been revised to include the percentages of the heat absorbing and heat reflecting lace coating coverage on each side of the composite layer. As amended, each respective heat absorbing and heat reflecting coating is present in the amount of at least 35% of each respective surface, and the total coverage being in the amount of up to 55% of the total surface area of the material. These values are supported in the specification, most notably on page 9, first and third full paragraphs.

Applicant respectfully draws to the Examiner's attention that the prior art is silent as to the total coverage of the lace coating on the combined surfaces of the open mesh, and for that matter, the prior art has not recognized the desirability of applying the heat reflective and heat absorptive coatings in the amounts noted in Applicant's description for achieving the results (discussed below) that the present invention achieves relative to prior art proposals.

As amended, the base claim is now directed to having at least 35% of each heat reflective and heat absorptive coating on each respective opposed surface for a total coverage of up to 55% of the total surface of both major faces. The prior art does not teach the use of such discontinuous coatings in such a manner as to achieve a total coverage of about 55%. The surprising advantages of using a product of the claimed invention (Product C) is highlighted in the tables 1, 2 and 3 of the specification.

With respect to claim 15 similar amendments, as noted above with respect to claim 1, have been effected to claim 15. More specifically, claim 15 has been revised to include the particular percentages or values as noted in page 9, and shown in tables 1, 2 and 3.

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With respect to claim 17, the phrase "placing in juxtaposition" has been inserted into the claim to more clearly define the method of protecting a substrate with the composite in accordance with the present invention. The cover, as noted on page 8, first full paragraph, and as illustrated in Figure 2. The cover, in contrast to those greenhouse covers noted in the prior art, is placed in a juxtaposition over a substrate or "grass" in the manner as described in Applicant's specification.

Notwithstanding the above noted claim amendments, Applicant offers the following comments; Applicant notes that the Examiner has objected to claims 1, 7, 9, 11 through 13, 15 and 17, in that U.S. '007 teaches a cover and method for grass protection with a composite layer composed of an open mesh weave of thermoplastic material, the weave having warp and weft strips forming a substantially thin uniform layer having opposed surfaces, the mesh defining individual slits extending through the layer. Further, the Examiner comments that U.S. '007 teaches different colors and thermal fusion temperatures, while not explicitly teaching a discontinuous heat absorbing layer and discontinuous heat reflecting layer on opposed surfaces. The Examiner further adds that Forbis et al. reference '362, teach that it is known to coat a thermoplastic material to create a heat absorbing layer on one side and heat reflective layer on the other side, and as such it would have been obvious to a person skilled in the relevant art to modify the teachings of U.S. '007 with those of U.S. '362.

Applicant submits that Hinsperger '007, while disclosing a fabric vented greenhouse constructed of an open weave scrim material, does not teach or suggest a cover having discontinuous heat absorbing and heat reflecting layers on opposed surfaces of the cover, nor does Hinsperger disclose the use of such a cover for grass protection. Thus, Hinsperger teaches away from the use of a cover, including the features presented in the amended claims, for grass protection.

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While the Examiner has stated that Hinsperger '007 "teaches a cover and method for grass protection", Applicant respectfully submits that the fabric vented greenhouse to which the U.S. '007 patent is directed is not used for grass protection. More specifically, the teachings of '007 teach away from a method of directly covering grass or other substrate material. Applicant respectfully draws the Examiner's attention to the description under the background and prior art in which the preferred aspects or objects of '007 are described, more specifically a vented greenhouse structure wherein the effective open area of the vent varies according to the temperature and air passage inside the greenhouse. There is no mention of using a cover and method for grass protection as commented upon by the Examiner. With respect to the Examiner's comments on page 3 of the detailed Office Action, first paragraph, while '007 mentions the use of different colors at column 3, line 18 to 19 the different thermal fusion temperatures as noted by the Examiner at column 3, lines 65 to 66 are directed to the fusing together of both the scrim and reinforcing material. The Examiner's attention is drawn to lines 64 et seq at column 3 and lines 1 through 4 at the beginning of column 4, in which the issue of thermal fusion of the reinforcing material and scrim are described. Applicant respectfully submits that there is no reference to the heat absorption or heat reflecting properties as alluded to by the Examiner. Applicant respectfully submits that there is no basis for the Examiner's objection and the Examiner is respectfully requested to withdraw the objection.

Even on the assumption that such materials can have heat absorption or heat reflection properties, there is no disclosure in U.S. '007 of the inherent use of two selected materials, one heat absorbing and one heat reflecting, nor of the additional step of forming a structure using such materials for opposed surfaces of the scrim material, with the specific selection of the direction in which the particular property is effective.

Further, with respect to the Examiner's comments concerning Forbis, '362, the

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Examiner comments that '362 teaches a thermal plastic material having a heat absorbing layer on one side and a heat reflective layer on the other side, (column 4, lines 8 to 15 and 47 to 50). Upon a review of the '362 reference, at column 4, lines 5, et seq, it is noted that the shade screen panel (16) is constructed of a water absorbent material, for use as a roof mounted shade assembly, where the cover is spaced from the roof on upright support posts, (for example, the cover being of a woven fabric or knitted fabric material). Such a product bears no relationship to a cover for grass protection and there is no suggestion in this reference that the product could be used in other fields.

Further, it is noted that '362 teaches that the shade screen panel (16) includes a first panel (16a) of water absorbent fabric material having a white or silver cover... and a second panel (16b) of a water absorbent fabric material having a dark or black color that is relatively absorbent of thermal energy radiated from a roof (12). More specifically, the Examiner's attention is drawn to the fact that the panel section (16a and 16b) as disclosed in column 4, lines 15 et seq, are "superimposed and overlap with each other with the energy absorbent panel (16b) being disposed between the reflective panel and the building structure (14)". The function of the panel is disclosed at column 4, line 22 et seq.

Applicant submits that Forbis et al., while disclosing a roof mounted shade cover, does not teach or disclose the use of an open mesh weave material having a discontinuous heat absorbing and heat reflecting layers on opposed surfaces of the cover, nor does Forbis et al., teach the use of such a cover for grass protection. Thus, Forbis et al., teach away from the use of a cover, including the features in the amended claims, for grass protection as the cover as taught by Forbis et al., is for use as a part of an overall structure separated from the ground or substrate.

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Further, the Forbis et al reference discloses that the panel structure as a whole functions as a heat sink whereby thermal energy from the building structure is transferred to the surrounding atmosphere by convection as wind currents sweep across the wet fabric panel (16) by what is termed thermal wicking action. There is no teaching of using discontinuous heat absorbing over heat reflecting layers for use in grass protection. As such, it is respectfully submitted that it would not have been obvious to a person skilled in the relevant art to modify the teachings of Hinsperger with the teachings of Forbis to arrive at Applicant's present invention.

Regarding claims 3, 4, 14 and 18 to 20, the above noted claim amendments are believed to overcome the objections.

Similar comments apply to claims 5, 6, 8, 10 and 16, as it is believed that the objections to these claims have been overcome by the amendments effected to the independent claims.

With respect to the Examiner's comments regarding claim 2, similar comments as noted above apply with respect to the Examiner's citation of Hinsperger '007 in view of Burke. Applicant respectfully submits that with respect to the secondary reference by Burke, the Examiner has commented that the subject matter of claim 2 would have been obvious as of the claim date having regard to Hinsperger in view of Burke.

Applicant respectfully submits that there is nothing in either of the references applied by the Examiner, taken individually or collectively, which would suggest or motivate one to provide the invention as claimed in the amended claims noted above. As such, the Burke reference does not show the combination of amended claim 1 and/or 2, and further does not assist the Examiner, either alone or in combination with the Hinsperger reference. Further Applicant submits that the results from subject matter as claimed in

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the amended claims fundamentally and patentably distinguish over both the Hinsperger and Burke references.

Applicant respectfully submits that the claims dependent upon claims 1, 15 and 17, namely claims 2 to 14, 16 and 18 to 20, should also be found allowable for, among other justifications, the same reason in, which supports the allowability of claims 1, 15 and 17. Withdrawal of the rejection of claims 1 to 20 is therefore respectfully requested.

Applicant also draws to the Examiner's attention that concurrent with the filing of this Amendment, a request for a 1 month extension has been filed.

No new matter has been added by way of the present amendment.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

By: 

Ian Fincham
Reg. No. 26,375
Patent Agent of the Applicant
Tel.: (613) 234-1907
McFadden, Fincham
225 Metcalfe Street
Suite 606
Ottawa, Ontario, Canada
K2P 1P9

Dated: July 9, 2004

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